

Summer vacations H.W.

Biology

Class X

2010-2011

Q1. Define the following terms:

- (a) Autotrophic nutrition
- (b) Saprophytic nutrition
- (c) Peristalsis
- (d) Emulsification
- (e) Expiration

Q2. Differentiate between the following pairs:

- (a) Photosynthesis and respiration
- (b) Respiration and breathing
- (c) Aerobic and anaerobic respiration

Q3. Give reasons for the following:

- (a) Why do we feel pain in our muscles after heavy exercise?
- (b) Why does food taste sweeter in our mouth after we chew upon it?
- (c) Why do aquatic organisms show faster rate of breathing?
- (d) Why do herbivores have longer intestines as compared to carnivores?
- (e) Why alveoli are considered good respiratory surfaces?

Q4. Explain the main steps of the mechanism of photosynthesis by green plants.
Give the relevant equation.

Q5. Explain the mechanism of breathing in human beings. Draw human respiratory system.

Q6. Explain what happens to the partly digested food when it reaches the duodenum?

Q7. State the importance of the following:

- (a) Villi in the small intestines
- (b) Salivary glands
- (c) Gall bladder
- (d) Mucus lining in the stomach
- (e) Cartilagenous rings in the trachea
- (f) Haemoglobin in human R.B.C's

Q8. Name the following:

- (a) Two protein digesting enzymes
- (b) Two digestive glands
- (c) The functional units of lungs
- (d) A saprophyte

Class Tenth
English holiday Homework

Compile information from the net , library and your Main Course Book And write an Article on Any **One** of the following aspect of environment :

- 1.) Pollution
- 2.) Deforestation
- 3.) Ozone Layer depletion Ang global warming

The above article should be written in **Paragraph** form and in third person.

It should have enough visuals and should be written on Assignment sheets.

Homework should be **Handwritten**. And should be submitted on 21-June,2010.

Class X Summer Vacation Homework- Physics

- Q1. Differentiate between renewable and non renewable sources of energy. Give two examples of each.
- Q2. What are the qualities of ideal source of energy.
- Q3. Mention four applications of Solar cell.
- Q4. What is the use of
- (a) Glass sheet
 - (b) Plane mirror in a solar heating device like solar cooker.
- Q5. What is the cause of geo thermal energy?
- Q6. Why are copper tubes painted black from outside in a solar heating device?
- Q7. What is bio gas? What are its major constituents?
- Q8. What are wind mills? Mention their application. Also write limitations of using wind energy.
- Q9. Why wind energy farm can only be established at specific locations?
- Q10. Why is charcoal considered a better fuel than wood. Explain.
- Q11. How does energy from a high rise dam be used to produce electricity?
- Q12. List three ways in which energy from the ocean can be harnessed. Write short notes on them.
- Q13. Distinguish between nuclear fission and nuclear fusion.
- Q14. What are nuclear wastes? Why are they harmful to humans?
- Q15. What is energy crises?

CLASS X
HOLIDAY HOMEWORK
SUBJECT: HISTORY

Project on Role of Women in the National Movement of India and Vietnam

CLASS X
SUMMER VACATION HOMEWORK
29th April 2010

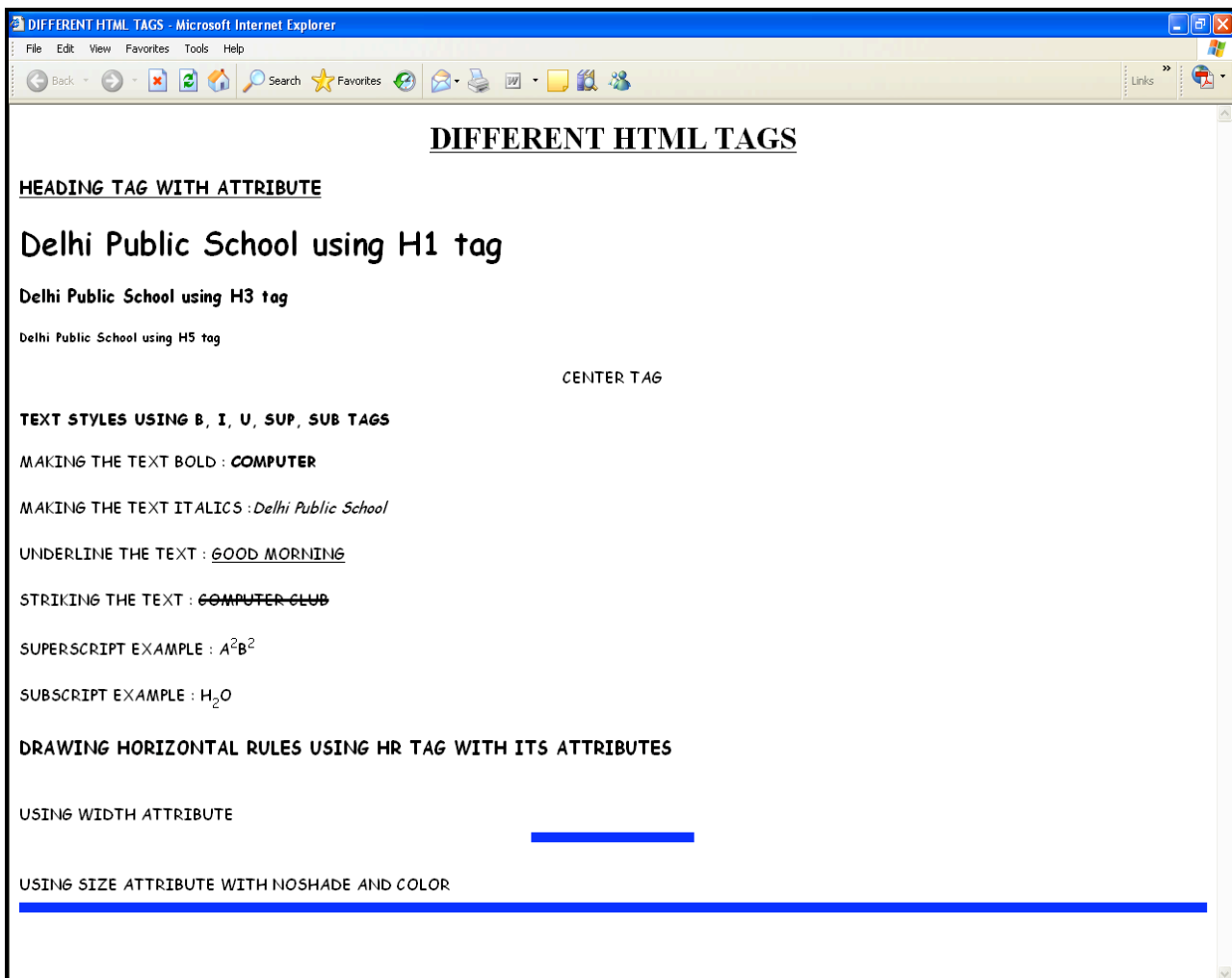
1. Make a book report – collect information on wild life sanctuaries, national parks and site their location on a political map of India.
2. A report on interstate water disputes, assault on rivers (river pollution) different methods of conservation.
3. Report on Heritage Tourism on India/collage on India

**HOLIDAY HOMEWORK
CLASS X
FOUNDATION OF INFO. TECHNOLOGY**

NOTE: Instructions for Printout

- (1) Index**
- (2) Question**
- (3) Main web page**
- (4) Coding of the web page**

Q1. Write HTML code to generate a Web Page in the format shown below:

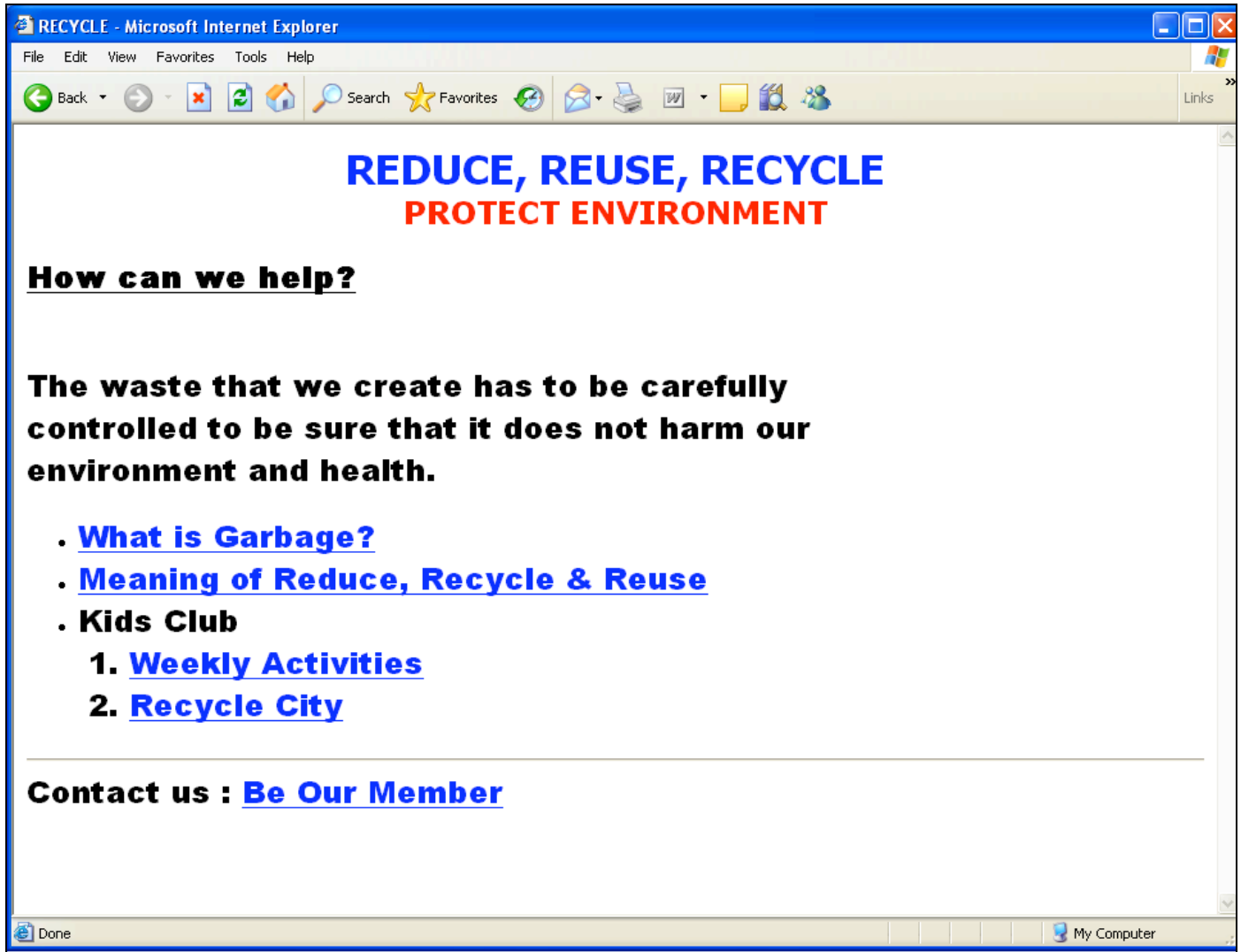


Special notes:

- (a) The title of the page is “DIFFERENT HTML TAGS”.
- (b) The Background color of the page is “Yellow”.
- (c) The Font used for the Heading is Times New Roman, size is 7 and color is Blue.

- (d) The sub heading is in “Comic Sans MS” font and the color is Red.
- (e) Second heading is using heading level 2.
- (f) Tags used in this web page are different heading tag like <h1><h3> etc, Center tag , different text style.

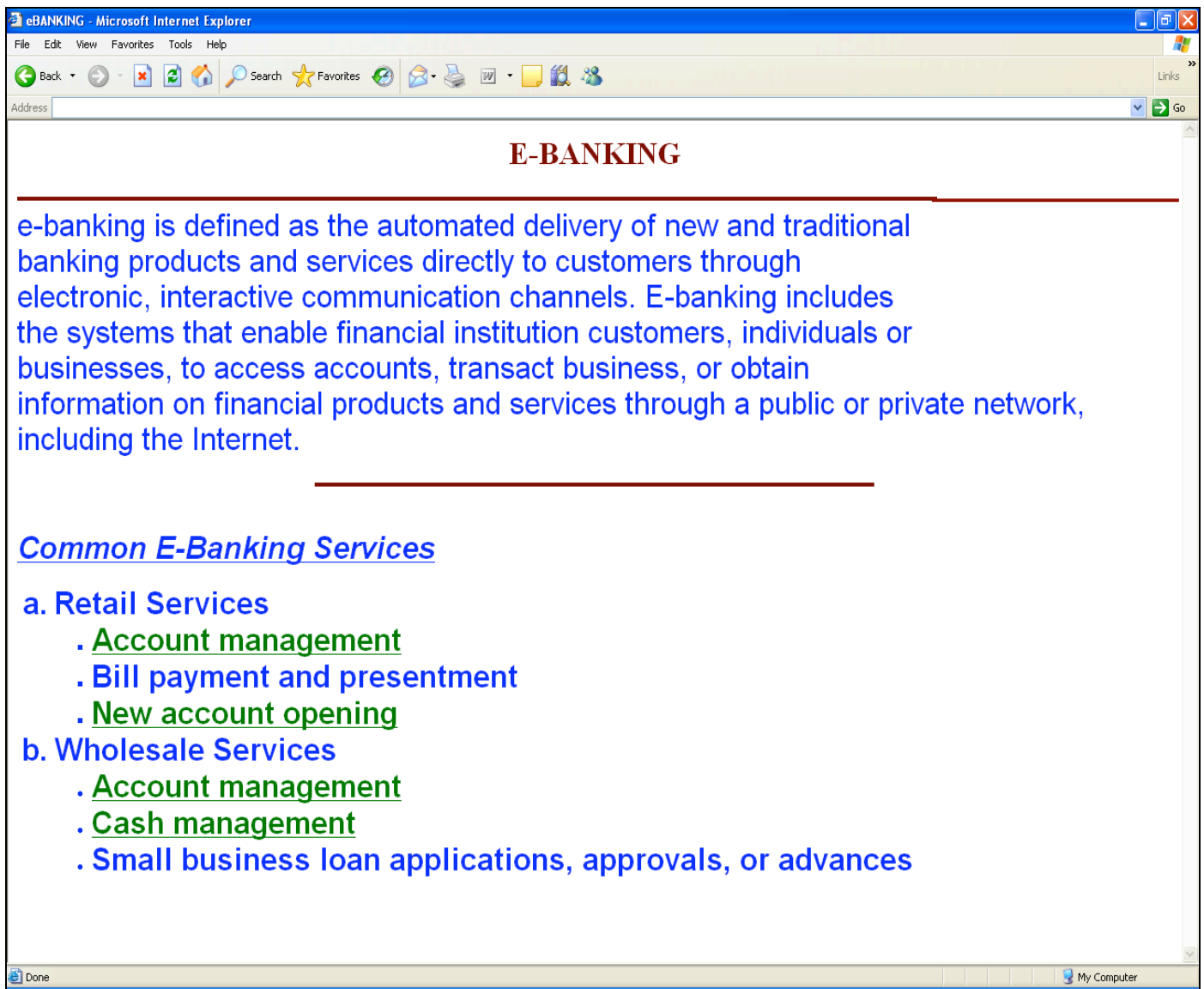
Q2. Write HTML code to generate a Web Page in the format shown below:



Special notes:

- (a) The title of the page is “Recycle”.
- (b) The Background color of the page is “Yellow”.
- (c) The Font used for the Heading is Tahoma, size is 6 and color is Blue.
- (d) The second heading is in Verdana font and the color is Red. Rest of the text is in Arial Black font.
- (e) “How can we help?” is the sub heading with heading level 2.
- (f) An Unordered List is used with the Ordered List.

Q3. Write HTML code to generate a Web Page in the format shown below:

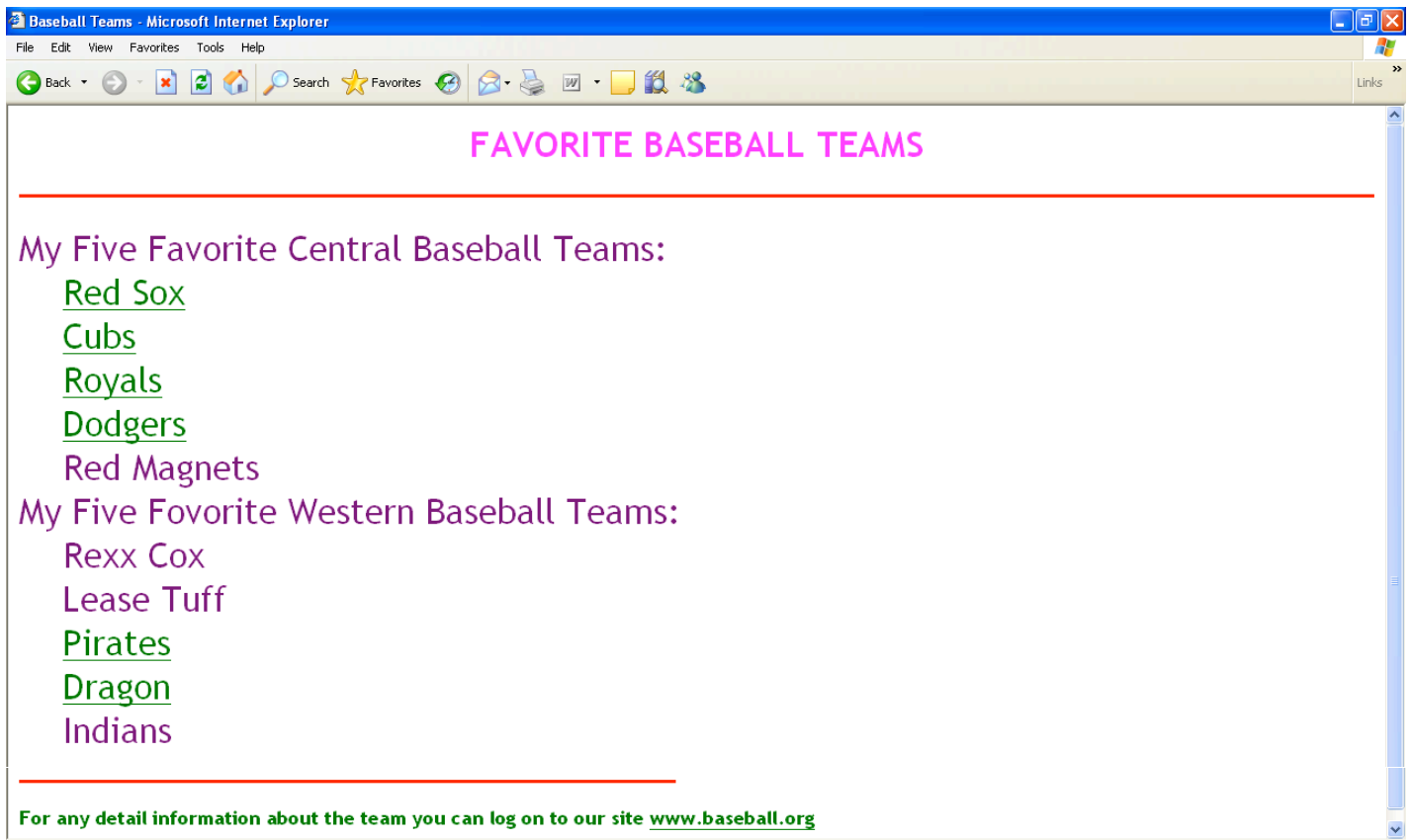


Special Note:

- (a) Background of page is pink
- (b) Title of the page is "eBanking".

- (c) Heading color of the page is “Red” and font style is in New Times Roman.
- (d) Font style of the whole page is “Arial”, color is “Blue”, size is 4
- (e) Horizontal rule is “Maroon” in color and size is 4, width for the second horizontal rule is 600 pixels and size is 5.

Q4. Write HTML code to generate a Web Page in the format shown below:



Special Notes:

- (a) Title of the page should be “Baseball Teams”.
- (b) Background color of the page should be “Pink” Text Color is Green.
- (c) All Font Style in the page is “Trebuchet MS” and color “Purple” for the sub heading and the main heading color is Magenta.

- (d) Use the concept of lists for creating the list given in the web page.
- (f) Horizontal rule is of size 3 and color "Red" but width for the second <HR> is 600 and is left aligned.
- (g) Bottom message is of size 2 and left aligned and no link is used and color is Blue.

Class – X
Maths
Summer Vacation Holidays Home-work

Do the following questions on the assignment sheets:

- Q.1. Show that the square of any positive integer is of the form $3m$ or $3m + 1$ for some integer m .
- Q.2. Use Euclid's division algorithm to find H.C.F. of 210 & 55.
- Q.3. Use Euclid's division algorithm to find H.C.F. of 81 & 237.
- Q.4. If the H.C.F. of 210 & 55 is expressed in the form $210 \times 5 + 55y$. Find y .
- Q.5. Find the largest number which divides 245 & 1029 leaving remainder 5 in each case.
- Q.6. Define fundamental theorem of Arithmetic.
- Q.7. Express 5005 as the product of its prime factors.
- Q.8. Express 156 as the product of its prime factors.
- Q.9. Find H.C.F. & L.C.M. of 90 & 144 by the prime factorization method.
- Q.10. Find greatest number of 6 digits divisible by 24, 15 & 36.
- Q.11. Prove that $\sqrt{2}$ is irrational.
- Q.12. Prove that $3\sqrt{2}$ is irrational.
- Q.13. Prove that $5 - \sqrt{3}$ is irrational.
- Q.14. Prove that $\sqrt{2} + \sqrt{5}$ is irrational.
- Q.15. Find which of the following have terminating decimal representation or a non-terminating repeating decimal expansion.
- (i) $\frac{29}{343}$ (ii) $\frac{15}{1600}$ (iii) $\frac{13}{3125}$
- Q.16. Draw the graph of the polynomial $f(x) = x^2 - 2x - 8$.
- Q.17. Find the zeroes of the quadratic polynomial $f(x) = 6x^2 - 3$.

- Q.18. If two zeroes of the polynomial
 $f(x) = x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$, find other zeroes.
- Q.19. Find the values of a and b for which the following system of linear Equations represent coincident lines.
 $2x - (a - 4)y = 2b + 1$, $4x - (a - 1)y = 5b - 1$
- Q.20. Find the value of k for which
 $X + 2y = 5$, $3x + ky + 15 = 0$ is inconsistent.
- Q.21. Solve the following system of linear equations.
 $\frac{7x - 2y}{xy} = 5$, $\frac{8x + 7y}{xy} = 15$; $x \neq 0$, $y \neq 0$.
- Q.22. Show that $x = 2$, $y = 1$ is a solution of
 $3x - 2y = 4$, $2x + y = 5$.
- Q.23. Represent the following system of linear equations graphically.
 $3x + y - 5 = 0$; $2x - y - 5 = 0$
 From graph, find the points where the lines intersect y-axis.
- Q.24. Solve the following system of linear equations using method of cross-multiplication.
 $2ax - 3by = a + 2b$, $3ax + 2by = 2a + b$
- Q.25. Solve for x and y:
 $37x + 43y = 123$; $43x + 37y = 117$
- Q.26. Find the value of k so that the lines $2x - 3y = 9$ and $kx - 9y = 18$ will be parallel.
- Q.27. Fill in the blank:
 The value of p for which the system of equations $3x + 5y = 0$ and $px + 10y = 0$ has a non-zero solution is _____.
- Q.28. The taxi charges in a city consist of a fixed charge together with the charge for the distance covered. For a distance of 10 km, the charge paid is Rs.105 and for a journey of 25 km, the charge paid is Rs. 255. what are fixed charge and charge per km? How much does a person have to pay for traveling distance of 35 km?
- Q.29. Represent the following pair of equations graphically and write the coordinates of points where the lines intersect the y-axis:
 $x + 3y = 6$

$$2x - 3y = 12$$

- Q.30. The age of father is 3 years more than 3 times the son's age. 3 years hence the age of the father will be 10 years more than twice the age of the son. Find their present ages.
- Q.31. Riya travels 300 km to her home partly by train and partly by bus. She takes 4 hrs if she travels 60 km by train and remaining by bus. If she travels 100 km by train and the remaining by bus, she takes 10 minutes more. Find the speed of train and bus separately.
- Q.32. Find p for which $4x + py + 8 = 0$ and $2x + 2y + 2 = 0$ will have unique solution.
- Q.33. Find the value of k for which $3x - y - 5 = 0$
 $6x - 2y - k = 0$ has no solution.
- Q.34. Solve the following system of linear equations by using method of elimination.

$$\frac{x}{10} + \frac{y}{5} + 1 = 15, \quad \frac{x}{8} + \frac{y}{6} - 1 = 14$$

- Q.35. Find the values of p and q for which the system of
 $3x + 4y - 12 = 0$
and $(p + q)x + 2(p - q)y = 5p - 1$
has infinitely many solutions.
- Q.36. On dividing $3x^3 + x^2 + 2x + 5$ by a polynomial $g(x)$, the quotient and remainder are $3x - 5$ and $9x + 10$ respectively. Find $g(x)$.
- Q.37. Find a quadratic polynomial whose zeroes are $\frac{1}{2} + 2\sqrt{3}$ and $\frac{1}{2} - 2\sqrt{3}$.
- Q.38. Obtain all other zeroes of $3x^4 + 6x^3 - 2x^2 - 10x - 5$, If two of its zeroes are $\frac{\sqrt{5}}{3}$ and $-\frac{\sqrt{5}}{3}$.
- Q.39. What must be subtracted from $4x^4 + 2x^3 - 8x^2 + 3x - 7$ so that it may be exactly divisible by $2x^2 + x - 2$?
- Q.40. Find the sum and product of zeroes of $2(x^2 - 1) + 3x - 9$.
- Q.41. If one root of $p(x) = \sqrt{2}x^2 - 3x + k$ is reciprocal of other, then find the value of k.

- Q.42. If $p(x) = ax^4 + bx^3 + cx^2 + dx + e$ is divided by $g(x) = lx^3 + mx + n$, then what can be the possible degree of remainder?
- Q.43. If $x = -\sqrt{2}$ is a zero of $p(x) = x^2 + \sqrt{2}x + k$, then find the value of k .
- Q.44. If α, β are zeroes of $p(x) = x^2 + px + q$, then find a polynomial having $\frac{1}{\alpha}$ and $\frac{1}{\beta}$ as its zeroes.
- Q.45. Find a quadratic polynomial whose sum and product of zeroes are $-2\sqrt{2}$ and $\sqrt{2}$ respectively.
- Q.46. For what value of k the following pair has infinite number of solutions:
 $(k - 3)x + 3y = k$
 $k(x + y) = 12$.
- Q.47. Choose the correct alternative.
 The system of linear equations
 $2x = 3(y - 3)$ and $6x - 9y = 5$ represents a
 (a) parallel lines (b) coincident lines
 (c) intersecting lines (d) none of these.
- Q.48. Solve : $\sqrt{2}x - \sqrt{5}y = 0, 2\sqrt{3} - \sqrt{7}y = 0$.
- Q.49. Determine the relation between the coefficients for which the pair $ax + by, lx + my = n$ has a unique solution.
- Q.50. Solve the following system of linear equations by using elimination method:
 $6(ax + by) = 3a + 2b, 6(bx - ay) = 3b - 2a$.
- Q.51. Solve the following system of linear equations:
 $\frac{2}{\sqrt{x}} + \frac{3}{\sqrt{y}} = 2, \frac{4}{\sqrt{x}} - \frac{9}{\sqrt{y}} = -1$
- Q.52. For which values of a and b does the following pair of linear equations have infinite number of solutions?
 $2x + 3y = 7,$
 $(a - b)x + (a + b)y = 3a + b - 2$.
- Q.53. Using method of cross-multiplication, solve the following system of linear equations:
 $(a + 2b)x + (2a - b)y = 2,$
 $(a - 2b)x + (2a + b)y = 3,$

Q.54. Solve the following system of linear equations graphically. $2x - 8 = -y$,
 $x - y - 1 = 0$

Shade the region bounded by these two lines and y-axis. Also find area of shaded part.

Q.55. Check if the equations $\frac{2}{3}x - 5y + 1 = 0$ and $\frac{3}{2}x + 3 = 5y$ are consistent or not.

Project Work

Prepare a project of 8 to 10 pages on the topic of Maths--- In day to day life.

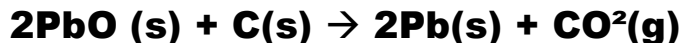
Project to be made on colored sheets and should be spiral bind.

HOLIDAY H.W.

SUBJECT-CHEMISTRY
CLASS-10

Do the following questions

Q1 Which of the statements about the reaction are incorrect?



- a) Lead is getting reduced
- b) Carbon dioxide is getting oxidised
- c) Carbon is getting oxidised
- d) Lead oxide is getting reduced

- (1) (a) and (b)
- (2) (a) and (c)
- (3) (a),(b) and (c)
- (4) All



The above reaction is an example of a

- (a) Combination reaction
- (b) Double displacement reaction
- (c) Decomposition reaction
- (d) Displacement reaction

Q3 What happens when dilute hydrochloric acid is added to iron fillings? Tick the correct answer

- (a) Hydrogen gas and iron chloride are produced
- (b) Chlorine gas and iron hydroxide is produced
- (c) No reaction takes place
- (d) Iron salt and water are produced

Q4 What is a balanced chemical equation? Why should chemical equations be balanced?

Q5 Translate the following statements into chemical equations and balance them

- (a) Hydrogen gas combines with nitrogen to form ammonia**
- (b) Hydrogen sulphide gas burns in air to give water and sulphur dioxide**
- (c) Barium chloride reacts with aluminum sulphate to give aluminum chloride and a precipitate of barium sulphate**
- (d) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas**

Q7 Write the balanced chemical equations for the following reactions

- (a) Calcium hydroxide + Carbon dioxide \rightarrow Calcium Carbonate + water**
- (b) Zinc + Silver nitrate \rightarrow Zinc nitrate + silver**
- (c) Aluminium + Copper chloride \rightarrow Aluminium chloride + copper**
- (d) Barium chloride + Potassium sulphate \rightarrow barium sulphate + potassium chloride**

Q8 Write the balanced chemical equation for the following and identify the type of reaction in each case

- (a) Potassium bromide(aq) + Barium iodide(aq) \rightarrow potassium iodide(aq) + barium bromide(s)**
- (b) Zinc carbonate(s) \rightarrow Zinc oxide(s) + Carbon dioxide(g)**
- (c) Hydrogen(g) + chlorine(g) \rightarrow hydrogen chloride(g)**
- (d) Magnesium(s) + Hydrochloric acid(aq) \rightarrow Magnesium chloride(aq) + Hydrogen(g)**

Q9 What does one mean by exothermic and endothermic reactions? Give examples

Q10 Why is respiration considered an exothermic reaction? Explain

Q11 Why are decomposition reactions called the opposite of combination reactions? Write equations for these reactions

Q12 write one equation each for decompositions reactions where energy is supplied in the form of heat, light or electricity

Q13 What is the difference between displacement and double displacement reactions? Write equations for these reactions

Q14 In the refining of silver, the recovery of silver from silver nitrate solution involved displacement by copper metal. Write down the reactions involved

Q15 What do you mean by precipitation reaction? Explain by giving examples

Q16 Explain the following in terms of gain or loss of oxygen with two examples each

(a) oxidation

(b) reduction

Q17 A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound formed

Q18 Why do we apply paint on iron particles?

Q19 Oil and fat containing food items are flushed with nitrogen. Why?

Q20 Explain the following terms with one example each

(a) Corrosion

(b) Rancidity

Read chapter 2

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